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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,018	09/05/2003	Li Gao	2002-IP-009344U1	9036

7590 10/29/2004  
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EXAMINER
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MCELHENY JR, DONALD E

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/657,018	Applicant(s) GAO ET AL.	
	Examiner Donald E. McElheny, Jr.	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-26 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09-05-03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09-05-04</u> . | 6) <input type="checkbox"/> Other: ____  |

1. Applicants are invited to show where each and every claim element can be found in the drawings. Applicants are reminded that every claim element, and especially if such is an inventive aspect, must be shown in the drawings. If any such claim elements are not found in the drawings then they inherently must not involve invention and are in the domain as being part of the well known prior art.

Applicant is reminded that each and every claim element must be found in the drawings as required by 37 CFR 1.83(a), 1.84(h) & (j), and MPEP 608.02(d), and also the drawings and specification must describe, show and correspond for all components shown or discussed as required by 37 CFR 1.84(p). The drawings must show every feature of the invention specified in the claims, including not only claimed structure but also all method, algorithm and program related steps within some form of flowchart(s). For mathematical related algorithms see 37 CFR 1.84(d). If a lack of correspondence between the claims and figures is merely a matter of applicant using different language in the claims than that found in the figures, then the intended correlation, basis and support for their equivalence must be shown for where claim elements exist within the figures and written disclosure. Some minimal flowchart diagram may be required for method inventions.

If amendment of the figures is required then note no new matter is permitted to be added to the drawings.

Applicant is advised that when submitting a proposed drawing correction any proposal by applicant for amendment of the drawings to cure defects must consist of two parts:

- a) A separate letter to the Draftsman in accordance with MPEP 608.02(r); and
- b) A print or pen-and-ink sketch showing changes in red ink in accordance with MPEP 608.02(v).

Appropriate and timely correction of the drawings, if necessitated, must be timely filed in response to this Office action or will not be held timely submitted and denied entry, and possibly result in this application being held abandoned.

2. As evidenced from the above rejections, no generic claims exist that are deemed patentable and therefore all dependent claim combinations result in distinct inventions or at least distinct species which can stand on their own merits. Applicants are required to elect one of these dependent claim combinations for further action on the merits if applicants continue to prosecute and seek issuance of the instant application.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-26 are rejected under 35 U.S.C. 102(a),(b) and (e) as being clearly anticipated by Goldwasser (6,285,955).

Note this reference teaches the plural data loggers and their sensors can cooperate on a transmission repeater basis to extend the range of the sensors. Thus "adjacent" sensors situations would naturally be included. Furthermore, this repeater operation among the plural data loggers/sensors would also include passing information from along a daisy chain transmission path configuration as recited in claims such as 6.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al. (6,117,643) in view of Aronstam et al. (6,443,228).

Simpson et al. teach the gist of the invention, and inherently the claimed features relating to location analysis of sensors, but while each sensor is located it is not explicitly taught that each is assigned a specific "unique identification number". One of ordinary skill in the art may interpret the teachings of this reference for the embodiment where the taught feature of a GPS location data component is included in the sensor signal, which thus is indeed a number and uniquely identifies each sensor by its location. Thus by such full operationally equivalent feature and teaching this reference alone can be interpreted as meeting this claim feature and the claims as well. However, it was notoriously well known in the prior art for similar plural data sensors environmental data gathering systems, and even for identical petroleum substrata research purposes as applicants' disclosed system is to be used, to include for each sensor an assigned unique identification code/number such as its own serial number. Such is taught by Aronstam et al. for even the same substrata environmental data gathering purposes, and thus it would have been obvious to one of ordinary skill in the art to consider these alternatives among these prior art reference teachings and combine for the data records mode one would desire to operate with. Note that the

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above cited Goldwasser (6,285,955) patent also teaches the use of sensors being assigned unique identifiers. Note in Simpson et al., particularly with regard to discussion of Fig. 34, that the plural sensors may cooperate in communication with one another as a data network and thus pass information amongst themselves and to a central reporting receiver.

8. Claims 1-26 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Ayoub et al. (2003/0208376 A1) in view of Aronstam et al. (6,443,228).

Ayoub et al. also teach the gist of the claimed and disclosed invention, with more details to the particular disclosed aspects of petroleum prospecting substrata research. Just as discussed supra for Simpson et al., Ayoub et al. appears to lack teaching of a specific identifier for each sensor. And just as discussed previously the teachings of Aronstam et al. can be likewise combined for teaching the obviousness of combining such feature with Ayoub et al.

9. Other prior art not applied against the claims is also pertinent to various claimed and disclosed features. Cited are a few examples of the multitude of geophysical data gathering systems with wireless and networking of data features, some of which also meet the claims -- especially when one considers "subterranean" to include underwater situations or where a sensor is buried but in communication with a surface wireless communication component.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny, Jr. whose telephone number is 571-

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272-2218. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoff Marc, can be reached on weekdays at telephone number 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306..

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald E. McElheny, Jr.  
Primary Examiner  
Art Unit 2857